

**Abstract of the Disclosure**

A context-selection mechanism is provided for selecting a best context from a pool of contexts for processing a data packet. The context selection mechanism comprises, an interface for communicating with a multi-streaming processor; circuitry for computing input data into a result value according to logic rule and for selecting a context based on the computed value and a loading mechanism for preloading the packet information into the selected context for subsequent processing. The computation of the input data functions to enable identification and selection of a best context for processing a data packet according to the logic rule at the instant time such that a multitude of subsequent context selections over a period of time acts to balance load pressure on functional units housed within the multi-streaming processor and required for packet processing. In preferred aspects, programmable singular or multiple predictive rules of logic are utilized in the selection process.